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10/727,941	12/04/2003	Antonio Gutierrez	2003L007	6980

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Law Department
1900 East Linden Avenue
P.O. Box 710
Linden, NJ 07036-0710

EXAMINER

LANG, AMY T

ART UNIT	PAPER NUMBER
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3731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/727,941

Applicant(s)

GUTIERREZ ET AL.

Examiner

Amy T. Lang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Arguments

The objections to the specification and claims 1 and 4 in prior office action mailed 06/22/2006 have been withdrawn in light of applicant's amendments mailed 11/21/2006.

The rejection of claims 1, 8, 14, 19, and 20 in paragraphs 5, 6, 8, and 9 of office action mailed 09/25/2006 have been withdrawn in light of applicant's arguments mailed 11/21/2006.

Applicant's arguments filed 10/26/2006 have been fully considered but they are not persuasive.

1. Specifically, applicant argues (A) that the functionality of dispersant is critical, and provided for in the specification, which the prior art does not overcome.

With respect to argument (A), the instant claims disclose a dispersant comprising the reaction product of a polyalkenyl substituted monocarboxylic acid, dicarboxylic acid, anhydride, or ester with a polyamine. Carrick discloses a polyalkenyl substituted succinic acid (dicarboxylic acid) or anhydride with a polyamine. Furthermore, the polyamine is triethylene tetramine or propylene diamine, where ethylene polyamines are the preferred compounds (column 17, lines 62-63; column 18, lines 6-7), which overlap the polyamines disclosed in the instant specification (see page 18, lines 14-16 of the

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spec). Since both Carrick and the instant application disclose the same polyamines that provide the nitrogen functionality, reacted with a dicarboxylic acid or anhydride, it would have been obvious for the final compound to also comprise the same functionality as is instantly claimed.

If applicant were to argue that the reaction process affects the functionality of the compound, attention is drawn to page 18, lines 4-10 of the instant specification. Here the applicant discloses the reaction to produce the claimed dispersant involving a coupling ratio from 0.9 to about 1 of succinyl groups to primary amine groups. However, Carrick discloses the same equivalent ratio by disclosing 1 mole of acylating agent to 0.5-2 moles of amino compound (column 19, lines 42-45). Acylating agents contain and therefore reflect succinyl groups and amino compounds contain and therefore reflect amine groups. Therefore, the ratio of equivalence overlaps the coupling ratio on page 18 of the specification, which leads to the claimed functionality. Additionally, the instant specification discloses the process to produce the claimed dispersant as by conventional methods (page 17, lines 31 through page 18, line 2) so that discussion of criticality is not found persuasive. Therefore, Carrick discloses a dispersant with overlapping functionality as instantly claimed.

Furthermore, Carrick discloses the acids or anhydrides comprising the dispersant as having 1.5 to 2.5 succinic groups (dicarboxylic acid producing moieties) per polyalkenyl moiety, which clearly overlaps the claimed range (column 17, lines 12-15). Although these ratios refer to the functionality prior to the reaction, it would have been obvious for the ratio to be within the same range after the reaction.

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In reference to Ritchie, the polyamine is also specifically disclosed as triethylene tetramine (column 12, line 15). Furthermore, the disclosed functionalized polymer is reacted with the polyamine, to produce the dispersant, also using conventional methods described in US 4,234,435, US 5,229,022, and EP-A-208,560 (column 12, lines 35-38). Since the instant specification recites the same patents for the conventional method described, it would have been obvious for the dispersant of Ritchie to also comprise the same nitrogen functionality as is instantly claimed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. 0

3. Claims 4 and 12 recite the limitation "total amount of diaryl amine moieties" in lines 1 and 2 of the claims. However, the claims from which claims 4 and 12 depend do not disclose a diaryl amine moiety. Therefore, there is insufficient antecedent basis for this limitation in the claim. Applicant is advise to change the "the total amount of diaryl amine moieties" to "a total amount of diaryl amine moieties."

Double Patenting

4. Nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 2, 5, 6-10, 13-15, and 19-22 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 10, 11, and 16-21 of U.S. Patent No. 6,869,919 B2 (Ritchie). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

US '919 discloses a lubricating oil composition utilized in diesel engines with an exhaust gas recirculation system. The composition comprises an olefin copolymer containing alkyl or aryl amine, or amide groups, or nitrogen containing heterocyclic groups or ester linkages. US '919 also discloses a nitrogen containing dispersant in the composition where the dispersant contributes from 0.10 to 0.18 wt. % of nitrogen to the lubricating oil composition.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a

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patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent.

(underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to where US '919 discloses the dispersant as a polyalkenyl-substituted mono- or dicarboxylic acid, ester, or anhydride reacted with polyamines (column 7, line 49 through column 8, line 9; column 11, line 59 through column 12, line 5). The polyalkenyl moiety has an Mw/Mn value of 1.5 to 2.0 (column 8, lines 28-36). Furthermore, US '919 discloses the dispersant as ashless, which therefore contains a sulfated ash content less than 0.5 wt. % (column 7, lines 52-54).

Claim 2 of US '919 discloses the polyalkenyl moiety of the dispersant with an average molecular weight from 1500 to 3000. Although US '919 does not disclose the ratio of mono- or dicarboxylic acid producing moieties per polyalkenyl moiety, it would have been obvious to use any moiety ratio including ones instantly claimed absent any showing of unexpected or surprising results.

Consistent with the above underlined portion of the MPEP citation, attention is also drawn to where US '919 further discloses the lubricating oil composition as a Group I, II, or III base stock (column 4, lines 44-46).

Furthermore, claim 18 of US '919 discloses the lubricating oil composition with 6 to 50 mmoles of phenate surfactant per kilogram of lubricating oil. Since US '919 does not specify the boron content in the dispersant, it is obvious that the content is zero. Additionally, US '919 does not specify the chlorine content, and only discloses the use of chlorine in one embodiment, therefore it would have been obvious to make the content zero.

6. Claims 1, 2, 5, 6-10, 13-15, and 19-22 are directed to an invention not patentably distinct from claims 1-5, 10, 11, and 16-21 of commonly assigned US 6,869,919 B2 (Ritchie). Specifically, although the copending claims are not identical, they are not patentably distinct for the reasons set forth in paragraph 11 above.

7. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned US 6,869,919 discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

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A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 2, 5, 6-10, 13-15, and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ritchie (US 6,869,919).

The applied reference has a common Inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

For explanation of the rejection, see paragraph 11 above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1-4, 6-12, 14-16, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick (US 6,583,092 B1) in view of Nalesnik (US 5,207,938).

Carrick discloses a lubricating oil composition for diesel engines (column 1, line 5; column 4, lines 25-35). The composition is comprised of Groups I, II, and III mineral oil base stocks, dispersants and viscosity index improvers (column 4, lines 37-52).

Carrick discloses the dispersants as a hydrocarbon substituted succinic acid or anhydride reacted with a polyamine, where succinic acid is a dicarboxylic acid (column 15, lines 1-32; column 16, lines 42-47; column 17, lines 30-33). The hydrocarbon substituent groups are derived from a polyalkene, specifically polyisobutene (column 17, lines 4-14). The polyalkene has a molecular weight from 700 to 2000 and a molecular weight distribution (Mw/Mn) from about 1.5 to about 5 (column 16, lines 52-59).

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Furthermore, the ratio of succinic groups to polyalkene substituents groups is disclosed as 0.9 to 2.5, which clearly overlaps the claimed moiety ratio from 1.3 to 1.7 (column 16, lines 47-52).

The nitrogen containing dispersant disclosed by Carrick is present in the lubricating composition at a concentration up to about 10% by weight (column 20, lines 55-61). Therefore, it is obvious for the wt. % of nitrogen from the dispersant to be greater than 0.08 wt. %. Furthermore, Carrick teaches the lubricating composition having a sulfur content no more than 0.02 wt. %, an ash content from 0.3 to 1.0 wt. %, and a chlorine content up to about 50 ppm, which is essentially chlorine-free (column 4, lines 3-24). Therefore, the dispersant must also contain the same ranges of elements as the lubricating oil.

The viscosity index improvers are disclosed in the composition as olefin copolymers, specifically a polymer of ethylene-propylene, grafted with maleic anhydride and then derivatized with an amine (column 23, lines 15-26). However, Carrick is silent as to the specific amine utilized.

Nalesnik discloses a viscosity index improver that is an olefin copolymer grafted with maleic anhydride and then derivatized with an amine, specifically the diaryl amine N-phenyl phenylene diamine. The mmole content of the diaryl amine is disclosed as 5.9 mmol (Example I, column 5). The total weight of the viscosity index improver is .2881 kg, and the viscosity index improver is added to a lubricating oil in an amount of 5 wt. % (Example I, column 5; Example IX, column 6, lines 33-34; column 2, lines 1-10).

Therefore, the total amount of diaryl amine moieties in the lubricating oil composition is

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1.02 wt. % (5.9mmol/.2881kg * .05wt%). It therefore would have been obvious for Carrick to use an aryl amine, such as N-phenyl phenylene diamine since it is common in the production of viscosity index improvers. Furthermore, Carrick discloses the olefin copolymer, from which the amine moieties are derived, with a molecular weight greater than 20,000, which clearly overlaps the instant claims 4 and 12. Therefore, one of ordinary skill would thereby obtain the invention as set forth in the presently cited.

13. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick (US 6,583,092 B1) in view of Nalesnik (US 5,207,938) and Locke (US 6,784,143 B2).

Carrick, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of mineral oil, dispersants, and viscosity index improvers. Furthermore, Carrick discloses calcium phenate as a detergent additive to the composition (Table, column 27, line 55; column 25, lines 49-57).

Nalesnik, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of diaryl amines reacted in a viscosity index improver.

Locke also discloses a lubricating oil composition for diesel engines (column 1, lines 3-8). Furthermore, the composition is comprised of Group I, II, or III mineral base stock mineral oil, dispersants, and viscosity index improvers (column 6, lines 36-38). The dispersants are disclosed as hydrocarbyl-substituted carboxylic acids reacted with a polyamine, where the substituent is polyisobutene (column 12, line 50 through column

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13, line 5). The viscosity index improvers are polymers of ethylene-propylene grafted with maleic anhydride and then derivatized with an amine (column 13, lines 14-40).

Therefore, the compositions disclosed by Carrick and Locke are very similar in composition.

Locke also discloses a calcium phenate-based detergent in amounts of 10 to 15 mmol of surfactant per kilogram of the oil composition, which clearly overlaps the instant claims 5 and 13 (column 11, line 62 through column 12, line 3). It therefore would have been obvious for Carrick to use the disclosed calcium phenate detergent in the content disclosed by Locke, since both lubricating compositions are very similar. Therefore, one of ordinary skill would thereby obtain the invention as set forth in the presently cited.

14. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick (US 6,583,092 B1) in view of Nalesnik (US 5,207,938) and Mishra (US 6,753,381 B1).

Carrick, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of mineral oil, dispersants, and viscosity index improvers. However, Carrick does not disclose the method by which the olefin molecule is derived.

Nalesnik, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of diaryl amines reacted in a viscosity index improver.

Mishra teaches that it is common in the lubricant art to produce amorphous ethylene-propylene copolymer viscosity index improvers (column 3, lines 26-42). These

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copolymers are produced by simultaneously blending and shearing using conventional processing equipment (column 3, lines 13-20). The viscosity index improvers also consist of a blend of amorphous ethylene-propylene copolymers and semi-crystalline ethylene-propylene copolymers (column 6, lines 34-40). Furthermore, the copolymers are functionalized with graft monomers of maleic anhydride. Mishra also discloses copolymers that were sheared and blended with a SSI of 18.89 so that it would have been obvious to produce copolymers grafted with maleic anhydride with the same SSI value (column 8, lines 40-52). It therefore would have been obvious to produce the viscosity index improvers disclosed by Carrick by the known method disclosed by Mishra. Therefore, one of ordinary skill would thereby obtain the invention as set forth in the presently cited.

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick (US 6,583,092 B1) in view of Nalesnik (US 5,207,938), Mishra (US 6,753,381 B1), and Ver Strate (US 4,804,794).

Carrick, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of mineral oil, dispersants, and viscosity index improvers. However, Carrick does not disclose the method by which the olefin molecule is derived.

Nalesnik, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of diaryl amines reacted in a viscosity index improver.

Mishra, as stated in paragraph 20 is incorporated here by reference, discloses a viscosity index improver produced by shearing and functionalizing copolymers. However, Mishra does disclose using conventional processing equipment to produce the copolymers, but does not specifically disclose a tubular reactor.

Ver Strate discloses that it is known in the art to use a tubular reactor to produce ethylene-propylene copolymers (column 2, lines 29-35). Copolymers formed by this method vary along their chain length, and therefore have a tapered structure. It therefore would have been obvious to produce the ethylene-propylene copolymers disclosed by Mishra with a tubular reactor. Therefore, one of ordinary skill would thereby obtain the invention as set forth in the presently cited.

16. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick (US 6,583,092 B1) in view of Nalesnik (US 5,207,938) and Ueda (US 4,286,567).

Carrick, as stated in paragraph 18 is incorporated here by reference, discloses a diesel engine lubricating composition comprised of mineral oil, dispersants, and viscosity index improvers. Furthermore, Carrick discloses calcium phenate as a detergent additive to the composition (Table, column 27, line 55; column 25, lines 49-57).

Nalesnik, as stated in paragraph 18 is incorporated here by reference, discloses a lubricating composition comprised of diaryl amines reacted in a viscosity index improver.

Ueda discloses that diesel engines commonly have an exhaust gas recirculation system (column 3, lines 23-25). It therefore would have been obvious to use the composition disclosed by Carrick in a diesel engine with an exhaust gas recirculation system. Therefore, one of ordinary skill would thereby obtain the invention as set forth in the presently cited.

Conclusion

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Lang whose telephone number is (571) 272-9057. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone

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number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/22/2006
Amy T. Lang

ATL


ANH TUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER
